

Special Functions: An Introduction to the Classical Functions of Mathematical Physics. By Nico Temme. John Wiley & Sons, New York. (1996). 374 pages. \$54.95.

Contents:

1. Bernoulli, Euler and Stirling numbers. 2. Useful methods and techniques. 3. The gamma function. 4. Differential equations. 5. Hypergeometric functions. 6. Orthogonal polynomials. 7. Confluent hypergeometric functions. 8. Legendre functions. 9. Bessel functions. 10. Separating the wave equation. 11. Special statistical distribution functions. 12. Elliptic integrals and elliptic functions. 13. Numerical aspects of special functions. Bibliography. Notations and symbols. Index.

Logic Programming: Proceedings of the 1995 International Symposium. Edited by John Lloyd. MIT Press, Cambridge, MA. (1995). 646 pages. \$75.00.

Contents:

Program committee. The Association of Logic Programming. Series foreword. Preface. Referees. Invited talks. Goal solving as operational semantics (Nachum Dershowitz). How to declare an imperative (Philip Wadler). Surviving the AI winter (William J. McClay). Logic programming and object modelling: A case study (Joxan Jaffar, Michael Maher and Gustaf Neumann). Language design. Monadic constructs for logic programming (Yves Bekkers and Paul Tarau). Implementing the linear logic programming language Lygon (Michael Winikoff and James Harland). Databases. Relationlog: A typed extension to Datalog with sets and tuples (Mengchi Liu). Top-down beats bottom-up for constraint extensions of Datalog (David Toman). Objects. Objects in forum (Giorgio Delzanno and Maurizio Martelli). A declarative semantics for behavioral inheritance and conflict resolution (Hasan M. Jamil and Laks V.S. Lakshmanan). Functional logic programming. A call-by-need strategy for higher-order functional-logic programming (Christian Prehofer). Abstraction of conditional term rewriting systems (Didier Bert and Rachid Echahed). Foundations I. Clause-based proofs for hereditary Harrop formulas (Alain Hui-Bon-Hoa). Optimizing clause resolution: Beyond unification factoring (Steven Dawson, C.R. Ramakrishnan, I.V. Ramakrishnan and Terrence Swift). A compositional proof method of partial correctness for normal logic programs (G  rard Ferrand and Arnaud Lallouet). Implementation. The implementation of AKL(FD) (Bj  rn Carlson, Mats Carlsson and Sverker Janson). Code generation for mercury (Thomas Conway, Fergus Henderson and Zoltan Somogyi). A simple approach to supporting untagged objects in dynamically typed languages (Peter A. Bigot and Saumya K. Debray). Foundations II. Declarative diagnosis revisited (Marco Comini, Giorgio Levi and Giuliana Vitiello). Semantical properties of encodings in logic programming (Jonas Barklund, Pierangelo Dell'Acqua, Stefania Costantini and Gaetano A. Lanzarone). Temporal logic programming in dense time (Christoph Brzozka). Analysis I. Functional dependencies and Moore-set completions of abstract interpretations and semantics (Roberto Giacobazzi and Francesco Ranzato). A blueprint for an abstract machine for abstract interpretation of (constraint) logic programs (Gerda Janssens, Maurice Bruynooghe and Veroniek Dumortier). Practical model-based static analysis for definite logic programs. Nonmonotonic reasoning. Logic programming without negation as failure (Yannis Dimopoulos and Antonis Kakas). An introspective framework for paraconsistent logic programs (Jia-Huai You, Suryanil Ghosh, Li-Yan Yuan and Randy Goebel). Declarative and fixpoint characterizations of disjunctive stable models (Nicola Leone, Pasquale Rullo and Francesco Scarcello). Analysis II. Efficient analysis of logic programs with dynamic scheduling (Mar  a Garc  a de la Banda, Kim Marriott and Peter Stuckey). Control flow analysis of Prolog (Thomas Lindgren). Proving termination of logic programs with delay declarations (Elena Marchiori and Frank Teusink). Transformation. An algorithm of generalization in positive supercompilation (Morten H. S  rensen and Robert Gl  ck). Correctness of logic program transformations based on existential termination (Kung-Kiu Lau, Mario Ornaghi, Alberto Pettorossi and Maurizio Proietti). Partial deduction of the ground representation and its application to integrity checking (Michael Leuschel and Bern Martens). Constraints. Beyond the glass box: Constraints as objects (Jean-Fran  ois Puget and Michel Leconte). Modelling real-time in concurrent constraint programming (Frank S. de Boer and Maurizio Gabbriellini). A formal approach to deductive synthesis of constraint logic programs (Kung-Kiu Lau and Mario Ornaghi). Semantics. Compositionality in *SLD*-derivations and their abstractions (Marco Comini, Giorgio Levi and Maria Chiara Meo). Type correct programs: A semantic approach (Bernard Malton and G  rard Ferrand). A paralogical semantics for the Prolog cut (James Andrews). Tutorial abstracts. Logic and objects (Chris Moss). Implementation issues for functional logic programming (Herbert Kuchen). Tradeoffs explicit and implicit parallelism (H  kan Millroth). Tutorial on program specialisation (Danny De Schreye, Michael Leuschel and Bern Martens). Panel abstracts. Integration of functional and logic programming languages (John Lloyd). D  j   vu—Or whatever are we doing here? . . . (Hassan Ait-Kaci). Functional logic languages: Combine search and efficient evaluation (Michael Hanus). Bridging the gap between logic and functional programming (Uday S. Reddy). The challenge of declarative programming (Mario Rodr  guez-Artalejo). Poster abstracts. Higher Order Babel (Herbert Kuchen and Josef Anastasiadis). An approach to verification in contextual logic programming (Vasco Pedro and Lu  s Monteiro). Combining rules and description logics: An overview of CARIN (Alon Y. Levy and Marie-Christine Rousset). Programming in Lygon: A brief overview (James Harland, David Pym and Michael Winikoff). Relaxation in constraint logic languages (Kannan Govindarajan, Bharat Jayaraman and Surya Montha). Regular signed resolution applied to annotated logic programs (Barbara Messing and Peter v. Stackelberg). Declarative annotations for logic programs (Corin A. Gurr). *P & P*: A combined Parlog and Prolog concurrent object-oriented logic programming language (Man-lai Tse, Wing-hang Wong and Ho-fung Leung). Synchronisation in Scc (Lubos Brim, David Gilbert, Jean-Marie Jacquet and Mojmir a Kretfnsky). Backtrackable state with linear assumptions, continuations and hidden accumulator grammars (Paul Tarau, Veronica Dahl and Andrew Fall). Author index.